**NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PER. \_\_\_\_\_\_**

**BIOLOGY - DNA Structure & Replication – Test**

**STUDY GUIDE**

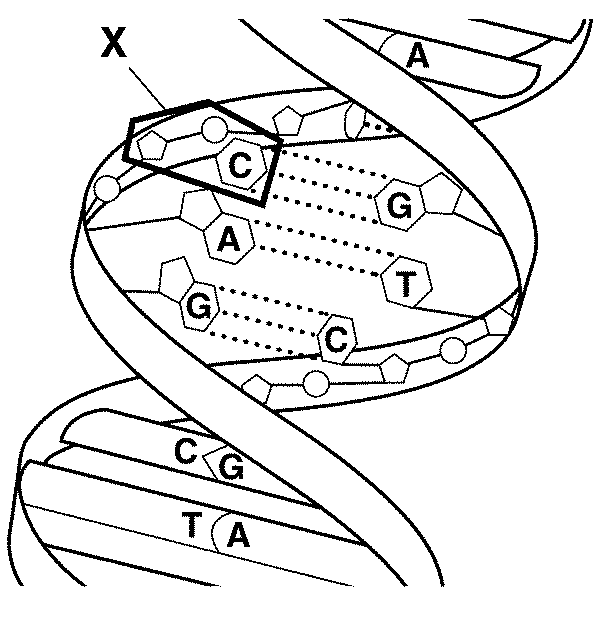
**Use Fig. 12-1 Below to answer questions 1, 2 3 & 4**

1. The object marked “**X**” in Fig. 12-1 Below is a \_\_\_\_.

2. The object marked **“Y”** in Fig 12-1 is a \_\_\_\_.

3. Figure 12-1 shows the structure of a(an)?

4. The object marked “**Z**” in Fig. 12-1 is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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**Z**

**Y**

**Figure 12-1**

5. What makes up a n nucleotide found in DNA?

6. What is the base-pairing rule?

7. DNA is copied during a process called?

8. In eukaryotes, DNA is located in the \_\_\_.

9. What must occure before a DNA molecule can be replicated?

10. What makes up a DNA molecule?

11. The enzyme which breaks the hydrogen bonds during replication is \_\_\_\_\_.

12. Because of base-pairing, we say that the two DNA strands are \_\_\_ to each other.

13. If an original strand of DNA has the sequence CTAGGT, what will the sequence on the new strand?

14. DNA is tightly wrapped around \_\_\_\_\_\_\_.

15. DNA replication results in two DNA molecules which contain one \_\_\_ and one \_\_\_ strand.

16. The woman who had her research taken is \_\_\_\_.

17. In eukaryotes, DNA is unzipped during replication by the enzyme \_\_\_\_.

18. In what year did Watson & Crick win the Nobel prize for their model of DNA?

19. The Watson and Crick model of DNA is a(an) \_\_\_\_\_\_\_, in which two strands are wound around each other.

20. Chromatin contains proteins called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

21. Describe the structure of a DNA molecule.

22. How many chromosomes are in a human diploid cell?

23. During DNA, the molecule must be unzipped. What must be broken to “unzip” DNA and what is the name of the enzyme that does this task?

24. What did Rosalind Franklin do to research the shape of the DNA molecule?

25. What is the difference between nucleotides? Name those things that are different.

26. Briefly describe the process of DNA replication.

27. What are the differences in DNA structure, location and number of chromosomes between prokaryotic cells and eukaryotic cells. Give examples.